

1. A clonal strain of attenuated vaccinia virus comprising a nucleotide sequence that is substantially identical to the sequence of SEQ ID NO:1 or SEQ ID NO:2.

2. The clonal strain of claim 1, wherein said strain comprises a nucleotide sequence that is at least 70% identical to the sequence of SEQ ID NO:1 or SEQ ID NO:2.

3. The clonal strain of claim 2, wherein said strain comprises a nucleotide sequence that is at least 80% identical to the sequence of SEQ ID NO:1 or SEQ ID NO:2.

4. The clonal strain of claim 3, wherein said strain comprises a nucleotide sequence that is at least 90% identical to the sequence of SEQ ID NO:1 or SEQ ID NO:2.

5. The clonal strain of claim 4, wherein said strain comprises a nucleotide sequence that is at least 95% identical to the sequence of SEQ ID NO:1 or SEQ ID NO:2.

6. The clonal strain of claim 5, wherein said strain comprises a nucleotide sequence that is at least 98% identical to the sequence of SEQ ID NO:1 or SEQ ID NO:2.

7. A clonal strain of attenuated vaccinia virus comprising a nucleotide sequence that hybridizes to the sequence of SEQ ID NO:1 or SEQ ID NO:2, a fragment of SEQ ID NO:1 or SEQ ID NO:2, or the complement of SEQ ID NO:1 or SEQ ID NO:2, under highly stringent conditions.

8. The clonal strain of claim 7, wherein said fragment comprises a coding sequence selected from the group consisting of SEQ ID NOs:3-471 (odd numbers), or the complement thereof.

9. A clonal strain of attenuated vaccinia virus comprising a nucleotide sequence that encodes a polypeptide selected from the group consisting of SEQ ID NOs:4-472 (even numbers).

10. A clonal strain of attenuated vaccinia virus comprising one or up to 235 polypeptides having amino acid sequences that are substantially identical to those encoded by the sequences of SEQ ID NOs:1 or 2, or the complements thereof.

11. The clonal strain of claim 10, wherein said clonal strain comprises 235 polypeptides having amino acid sequences that are substantially identical to those encoded by the sequences of SEQ ID NOs:1 or 2, or the complements thereof.

12. A pharmaceutical composition comprising the clonal strain of vaccinia virus of claim 1 and a pharmaceutically acceptable carrier or diluent.

13. A method of preventing or treating variola virus infection in a patient, said method comprising administering to the patient the pharmaceutical composition of claim 12.